REMARKS

This is a full and complete response to the Office action dated September 27, 2007.

All comments and remarks of record are herein incorporated by reference. Applicants respectfully traverse these rejections and all comments made in the Office Action. Nevertheless, in an effort to expedite prosecution, Applicants provide the following remarks regarding the cited references.

DISPOSITION OF CLAIMS

Claims 11-28 are pending in the application. No new matter has been added.

REJECTION UNDER 35 USC §103

Claims 11-14 and 17-27 stand rejected under 35 USC §103(a) as being unpatentable over **Victor et al.**, US 6,127,094 (hereinafter "**Victor**"). Applicants respectfully traverse this rejection.

The Examiner has asserted a number of arguments with respect to Applicants reply filed July 9, 2007, including (1) Victor teaches mixed portions of isoprene and butadiene as optional components of a polymer block, (2) Applicants have not filed a declaration identifying any unexpected results, (3) Applicants examples contained in the specification are not persuasive because **Victor** yields the same advantages Applicants are concerned with. Applicants respectfully disagree.

While the Examiner asserts that **Victor** discloses mixed isoprene and butadiene for yielding the same advantages as the claimed invention, Applicants respectfully disagrees. **Victor** instead seeks to provide a photosensitive printing plate for water processing which still has good properties. *See* **Victor**, col. 3, lines 8-39. The reference attempts to achieve this by use of a resinous compound made up of elastomer forming monomers, namely acrylates. *Victor*, col. 3, lines 43-53, col. 4, lines 36-44. The use of thermoplastic block copolymers such as those utilized by Applicants need not even be added to achieve the properties intended by **Victor** (note the thermoplastic block

copolymers [component E] is optional since the amount can be zero weight percent). Thus to achieve the properties intended by **Victor**, **Victor** teaches that acrylates are the critical component, whereas component (E) is not. This can be seen by the listing of components in **Victor**'s composition noted in col. 3, line 45 to col. 4, line 12 as follows:

The composition disclosed by **Victor** is comprised of (col.3, line 43 to col. 4, line 13):

(A) 25-80 wt% of a copolymer which includes (as 25-95% of the copolymer) elastomer forming monomers, which are acrylates, methacrylates and the like;

(B) 0.2 to 2 mol of a washout aid

(C) 5-70 wt% of at least one ethyleneically unsaturated monomer

(D) 0.01 to 20 wt% of at least one phopolymerization initiator

(E) 0-50 wt% of at least one polymer selected from

(i) a linear thermoplastic having the general formula (A-B-A), (A-B) or (A-B)

(ii) a linear polymer;

(F) 0 to 20 wt% of at least one plasticizer;

(G) 0 to 20 wt% of at least one emulsifier.

As can be seen above, the composition as component (A) having acrylates is required, while component (E) is merely optional. **Victor's** intent is further demonstrated by the title of the reference which is "Acrylate Copolymer-Containing Water-Developable Photosensitive Resins and Printing Plates Prepared therefrom." (emphasis added).

Furthermore, although the Examiner indicates **Victor** intends to achieve improved physical properties such as tensile strength, hardness, resilience and flexibility, and is also "concerned" with solvent resistance (water) and processing durability, Applicants respectfully submit that the Examiner loses sight of the problem which **Victor** wishes to solve. Office Action, page 6. While **Victor** is seeking good properties, it is to allow for water processing. *Victor*, abstract. Water processing enables portions of the

photosensitive block copolymer which were not exposed to radiation to be removed by water. *Victor*, col. 12, lines 49-61. The portions exposed to radiation would be hardened as a result, leaving the desired image. Therefore, water processing is the primary purpose to which **Victor** is directed. *See* **Victor**, col. 3, lines 8-39.

Thus one of skill in the art would understand **Victor** to be directed to enabling water processing of photosensitive materials, and would also understand that acrylates are required for such processing, whereas block copolymers are not.

In addition, Applicants respectfully note that while **Victor** does indicate that the B block may contain two or more different elastomeric materials, **Victor** does not disclose or suggest (1) which specific two or more different elastomeric materials should be used, or (2) that there would be an advantage to using a block copolymer that contains a mixed I/B mid block compared to using a midblock that contains only one type of monomer, and furthermore, (3) **Victor** produces the expectation that one elastomeric material can be substituted for two elastomeric materials and vice versa without any change in performance. Also as noted above, the use of component (E) [the thermoplastic block copolymer] in **Victor** is entirely optional, as it is indicated its range can be 0-50 wt%. This further produces the expectation that component (E) would not have a significant effect on the printing plate according to **Victor**. Therefore, one of skill in the art would have no expectation in view of **Victor** that a mixed I/B midblock according the present claims would produce the superior results as clearly shown by Applicants.

Therefore even in view of the disclosure of **Victor** as discussed immediately above, the examples of the present application clearly show unexpected results.[1] The Examples of the present application compare mixed I/B midblock copolymers to the use of SIS and SBS block copolymers, and also SIS and SBS block copolymers mixed together. As the Examples demonstrate, superior results are obtained from the use of the claimed mixed I/B midblock within a specific range. This cannot be derived from

[1] Applicants respectfully note that the Federal Circuit has indicated that unexpected and unpredictable results may serve as a basis to show a claimed invention was not obvious. *See In re Dillon*, 919 F.2d 688, 16 USPQ2d 1897 (1990); MPEP §2144.08 II(B).

Victor, as **Victor** at most discloses the equivalence of mixed and single monomer midblocks.

In particular, the mixed isoprene/butadiene midblock demonstrated a much better balance of stability and viscosity than the SBS copolymers and a much better hardness than the SIS copolymers. Additionally, the mixed midblocks according to the present claims demonstrated good transparency properties compared to blends of SIS and SBS copolymers which showed poor transparency. One of ordinary skill in the art would not expect such an improvement in the balance of properties from the disclosure of **Victor**, which indicates the equivalence between block copolymers having only one type of polymer and those having two or more. Therefore, no prima facie case of obviousness has been demonstrated, and Applicants respectfully request the above mentioned rejection be withdrawn.

Furthermore, Applicants respectfully assert that the examples of the application are sufficient, and no additional declaration or affidavit is required, as suggested by the Examiner. Applicants respectfully note that as indicated in *In re Antonie*[2], in delineating the claimed invention as a whole, the properties as indicated in the specification can be taken into account, i.e. the Examples. MPEP §2141.02(V). Furthermore, 37 CFR 1.63 requires a declaration be filed along with the application regarding the contents of the application, and which was filed in the present case. Thus no additional declaration needs to be filed, as the examples contained in the Application are sufficient.

Therefore, as **Victor** does not disclose that thermoplastic block copolymers are required to achieve the reference's intended results, and furthermore as **Victor** indicates the equivalence of mixed and single monomer midblocks, in view of the Applicants showing of superior results of the claimed mixed I/B midblock, Applicants respectfully assert no prima facie case of obviousness may be established. Accordingly, Applicants respectfully request the above mentioned rejection be withdrawn.

[2] In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977)

REJECTION UNDER 35 USC §103(a)

Claims 11-14, 20-24 and 28 stand rejected under 35 USC §103(a) as being unpatentable over **Chen et al.** US 4,369,246 (hereinafter "**Chen**") as evidenced by **Holden et al.** (hereinafter "**Holden**"), US 3,265,765. Applicants respectfully traverse this rejection.

With respect to the **Chen** reference Applicants note that **Chen** does not disclose mixing of isoprene and butadiene in a midblock of a block copolymer. As noted in the reply filed July 9, 2007, **Chen**, however, discloses "pure" block copolymers as well as "tapered" block copolymers. *See* **Holden**, col. 4, lines 63-70; col. 3, lines 13-49.

Neither of which is a mixed isoprene or butadiene midblock. In the case of tapered block copolymers, the midblock gradually "tapers" becoming increasingly rich in non-elastomeric monomers.

Furthermore, as the tapered block copolymer of **Chen** involves mixing elastomeric and non-elastomeric, one of skill would not simply substitute isoprene or butadiene for the non-elastomeric monomer units because isoprene and butadiene are well known to be elastomeric monomer units.

The Examiner further refers to **Holden** for modifying the block copolymers of **Chen** to include mixed conjugated diene midblocks. The Examiner relies on col. 4, lines 32-36 of the **Holden** reference as a basis for asserting that **Holden** teaches that "the polymer block can be any synthetic elastomer of an aliphatic conjugated diene, such as isoprene and butadiene." Applicants respectfully assert that **Holden** does not at all disclose or suggest the mixing of butadiene and isoprene or any conjugated diene as a midblock.

The citation referred to by the Examiner is as follows (col. 4, lines 32-36 of **Holden)**:

> The elastomeric mid section can be a polymer block of essentially any synthetic elastomer preferably of an aliphatic conjugated diene, such as isoprene, methyl isoprene, butadiene, copolymers of styrene-butadiene type, and butadiene-acrylonitrile.

The above citation does not refer to mixing conjugated dienes in a mid-block of a block copolymer. As can be seen above, it is stated that the elastomeric mid section can be a polymer block of any "synthetic elastomer preferably of an aliphatic conjugated diene." Such terms are in the singular and not plural – "an aliphatic conjugated diene" and therefore, only refer to one conjugated diene. When the citation does refer to more than one type of monomer they are only "copolymers of styrene-butadiene type, and butadiene-acrylonitrile" and does not include mixing conjugated dienes. Thus, mixed conjugated dienes are not disclosed or contemplated in this citation or the rest of the document.

Thus Examiner's statement that "Holden definitely teaches a mixture of any of the conjugated dienes listed, including isoprene and butadiene" Applicants respectfully assert is wholly without basis in the reference. It is merely impermissible hindsight bias using Applicants disclosure as a blueprint.

Therefore, neither reference **Chen** or **Holden** discloses mixing elastomeric dienes in the midblock, and certainly does not disclose the claimed I/B ratio of block C. Accordingly, Applicants respectfully request the above mentioned rejection be withdrawn.

In order to facilitate the resolution of any issues or questions presented by this paper, the Examiner is invited to directly contact the undersigned by phone to further the discussion.

The undersigned representative requests any extension of time that may be deemed necessary to further the prosecution of this application.

The undersigned representative authorizes the Commissioner to charge any additional fees under 37 C.F.R. 1.16 or 1.17 that may be required, or credit any overpayment, to Deposit Account No. 14-1437, referencing Attorney Docket No. 8132.003.PCUS00.

Conclusion

Having addressed all issues set out in the Office action, Applicants respectfully submit that the claims are in condition for allowance and respectfully request that the claims be allowed.

Respectfully submitted,
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